

- c) generating a reflected light spectrum from the tissue or cells by illuminating the stained tissue or cells with light;
- d) directing the reflected light spectrum to a spectrometer;
- e) comparing the reflected spectrum of the stained tissue or cells with a library of previously obtained spectra; and
- f) correlating the reflected light spectrum with a disease state, whereby an in situ diagnosis of a disease state is made.

12. (Twice amended) A method for diagnosing a disease state in situ in biological tissue or cells of a living organism comprising:

- a) applying to the tissue or cells a thiazine dye to stain the tissue or cells;
- b) removing excess dye from the tissue or cells;
- c) generating a reflected light spectrum of the thiazine dye applied to the stained tissue or cells by illuminating the stained tissue or cells with light while simultaneously measuring and recording the reflected light spectrum of the dye;
- d) directing the reflected light spectrum to a spectrometer;
- e) comparing the reflected spectrum of the stained or dyed tissue or cells with a library of previously obtained spectra; and
- f) correlating the reflected light spectrum with a disease state, whereby an in situ diagnosis of a disease state is made.

13. (Twice Amended) A method for the cytotoxic destruction of dysplastic, pre-cancerous or cancerous cells comprising: